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**United States Patent** [19]

DiSanto et al.

[11] **Patent Number:** **5,279,694**[45] **Date of Patent:** \* **Jan. 18, 1994****[54] CHIP MOUNTING TECHNIQUES FOR  
DISPLAY APPARATUS****[75] Inventors:** **Frank J. DiSanto**, North Hills; **Denis A. Krusos**, Lloyd Harbor, both of N.Y.**[73] Assignee:** **Copytele, Inc.**, Huntington Station, N.Y.**[\*] Notice:** The portion of the term of this patent subsequent to Jan. 9, 2007 has been disclaimed.**[21] Appl. No.:** **950,640****[22] Filed:** **Oct. 26, 1992****Related U.S. Application Data****[60]** Continuation-in-part of Ser. No. 720,959, Jun. 25, 1991, abandoned, which is a continuation of Ser. No. 383,278, Jul. 18, 1989, Pat. No. 5,028,841, which is a division of Ser. No. 208,854, Jun. 14, 1988, Pat. No. 4,892,607, which is a continuation of Ser. No. 938,147, Dec. 4, 1986, abandoned.**[51] Int. Cl.<sup>5</sup>** ..... **B32B 31/00****[52] U.S. Cl.** ..... **156/275.5; 156/275.7;**  
156/380.9**[58] Field of Search** ..... 156/272.8, 380.9, 273.3,  
156/273.5, 275.5, 275.7**[56] References Cited****U.S. PATENT DOCUMENTS**

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Driver circuit chip mounting techniques for use in the fabrication of monolithic flat panel displays are disclosed in accordance with the teachings of the present invention. According to a preferred embodiment, a driver circuit having a spot of optical cement is precisely positioned within a location of metalized, grouped and patterned row or column conductors. Thereafter collimated ultraviolet light is imaged through the display onto the rear of the driver circuit until the optical cement has become sufficiently tacky to permit the display to be inverted whereupon collimated ultraviolet light may be directly applied to complete the full curing of the optical cements.

**2 Claims, 4 Drawing Sheets**